Why and how do we use carbon markets to boost the deployment of carbon capture and storage?

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About JOGMEC – Japan Organization for Metals and Energy Security

• Securing the stable supply of natural resources for Japan
• Realizing carbon neutrality through CCS, supply of low carbon fuels including hydrogen & ammonia.

- Oil & Natural Gas
- Metals
- Coal
- Geothermal
- Stockpiling
- Mine Pollution Control

- CCS
- Hydrogen
- Ammonia
- Offshore wind

- Geological surveys
- Marine resource development
- Financial assistance
- Technological development and technical support
- Stockpiling
- Environmental safety and mine pollution control
- Collection and provision of information
- Resource diplomacy and international cooperation
Japan’s CCS Long-Term Roadmap

- A business environment for commencement shall be prepared by 2030, involving cost reduction, public understanding, overseas CCS promotion, and CCS Business Act legislation. This is based on the rough estimation of enabling CO2 storage of **about 120 to 240 million tons as of 2050**, and a full-scale CCS business shall deploy after 2030.

![Graph showing CO2 storage targets and timelines](chart.png)

**Technical support.**
- Storage site surveys
- **Demonstration projects.**
- Guidelines preparation related to CCS operation.

**Financial support**

**240 MMTPA**
(IEA’s Net Zero Emission Scenario)

**120 MMTPA**
(IEA’s Announced Pledges Scenario)

*(Source)METI: May, 2023*
JOGMEC selected 7 demonstration projects, starting CO2 storage by FY 2030.

Capture CO2 from wide-area emission sources in Japan.

Transport/ Storage to Malaysia

Transport/ Storage to Oceania

※ The shown areas are only for illustrative purposes and do not represent exact locations.
Use of carbon markets to boost CCUS project deployment.

1. Despite the recent surge in CCUS announcements for the capture, transport, storage and also full-chain projects, it is still the case that **CCUS deployment by 2030 would remain substantially below** (little more than one-third of) the amount of around 1 Gt CO2 per year that is required in the IEA-NZE Scenario (IEA).

2. Today, significant amounts of public subsidies have been announced globally, however, **there is an urgent need to develop business models that fit into the business environment of each region and country.**

3. **Utilizing carbon markets domestically and internationally will be an important option, which needs to be adopted by businesses.**

The need to accelerate interaction with ETSs and carbon crediting schemes especially in compliance carbon markets.
- Compliance carbon market
- Voluntary carbon market
JOGMEC’s initiative to unlock the potential carbon markets for CCS deployment:

- Successful international workshop held with Ministry of Economy, Trade and Industry (METI) and International Emission Trading Association (IETA).

- Published first ever handbook on CCS Carbon Credits.

- Contribution to methodological development as a member of “CCS+ initiative”, a multistakeholder platform.
JOGMEC’s initiative to unlock the potential carbon markets for CCS deployment

- “Asia Zero Emission Community (AZEC)”, a Japanese government-led initiative, is a platform consisting of Asian countries that are promoting decarbonization. Under AZEC, JOGMEC aims to contribute to CCS deployment by conducting various activities.

- JOGMEC contributes to generate carbon credits from CCS projects (e.g. Gundih CCS) under the Joint Crediting Mechanism scheme. We are currently conducting a discussion with ASEAN countries cooperating with METI and relevant agencies.

▼Asia Zero Emission Community (AZEC)

▼CCS project in Gundih Gas Field in Indonesia

Source: AZEC

Source: Extracted from presentation material by Dr. Kensuke Shiomi at METI-JOGMEC-IETA joint workshop, “Global Carbon Markets and CCS: Towards ASEAN Decarbonization”, Jan 2023
International Workshop on CO2 Cross-border Transportation

JOGMEC, METI, Petronas to work on cross-border CO2 transport (Oct 2023)

Workshop on CO2 cross-border transport and storage (CCS) in Asia and the Pacific (Feb 2024)
For more information

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